

# **Behavioural polymorphism in one of the world's largest populations of loggerhead sea turtles *Caretta caretta***

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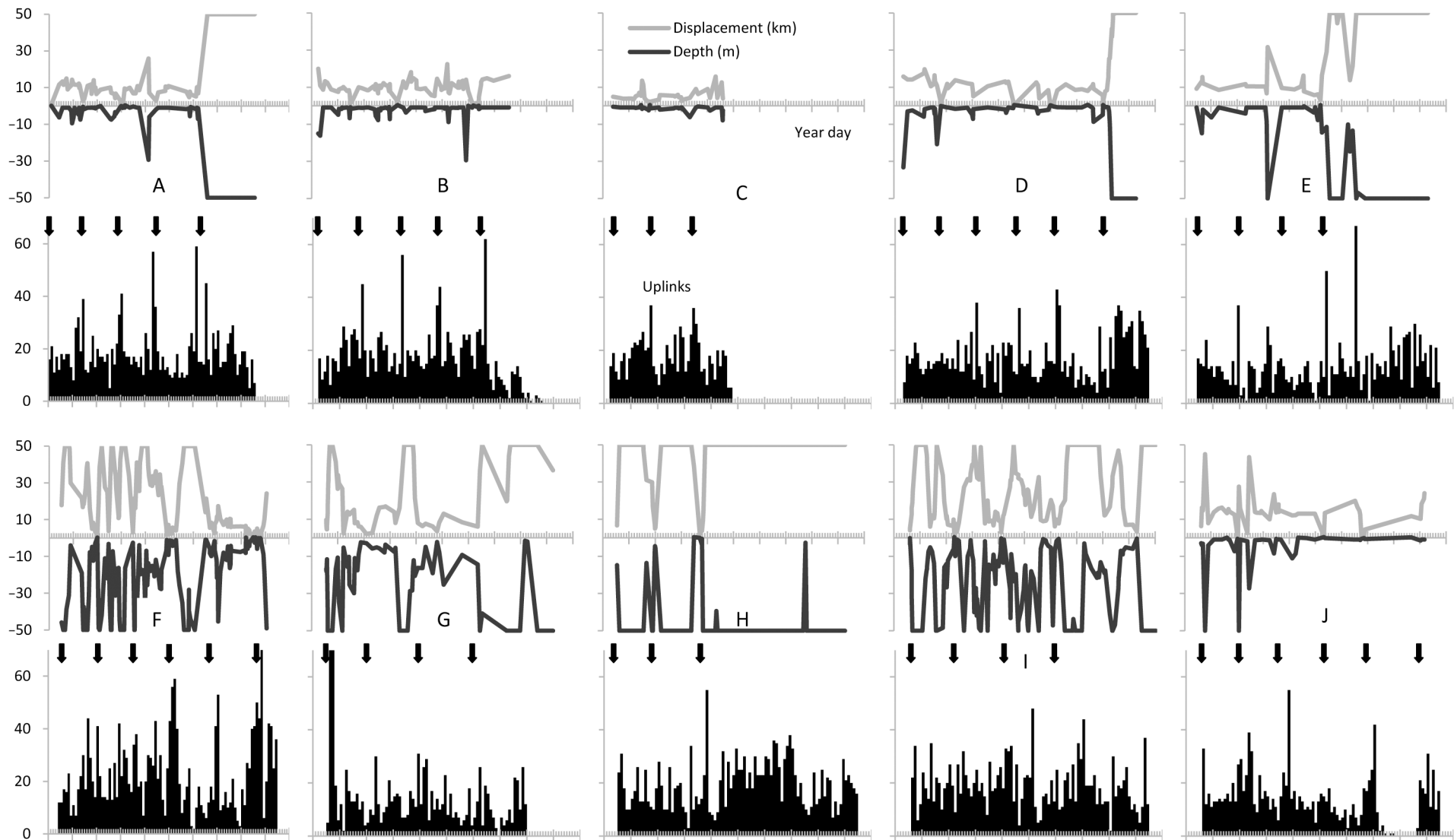
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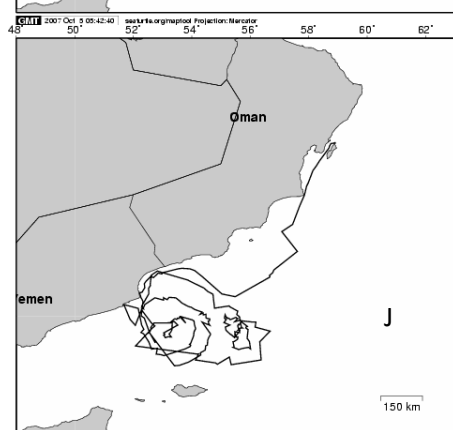
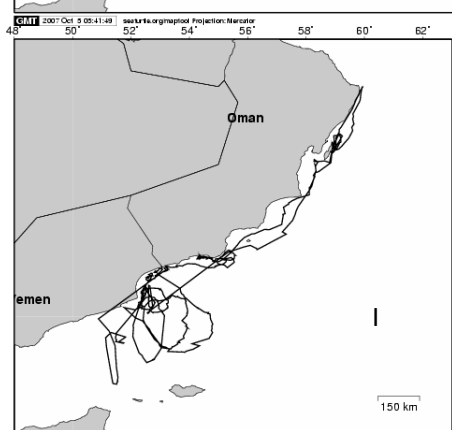
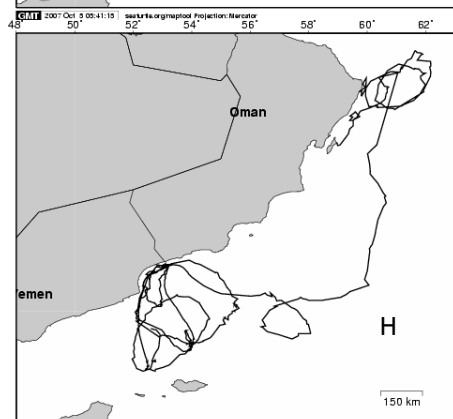
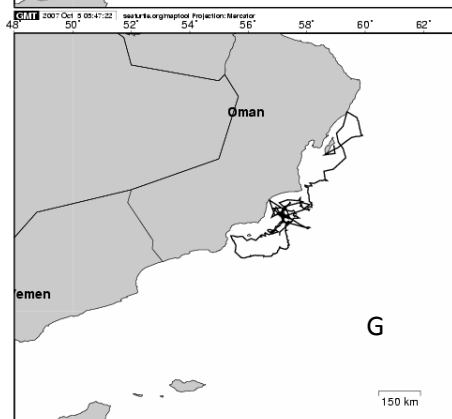
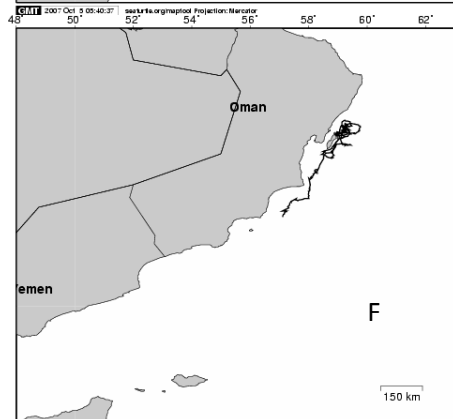
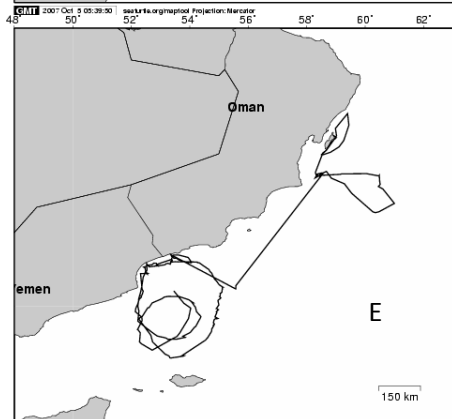
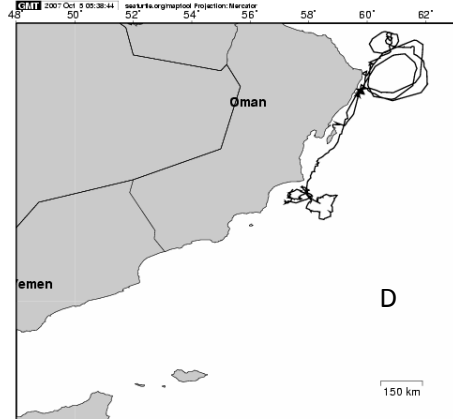
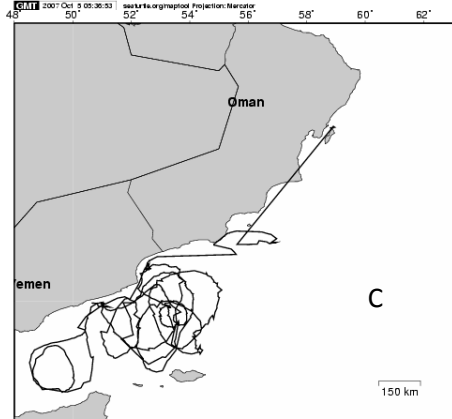
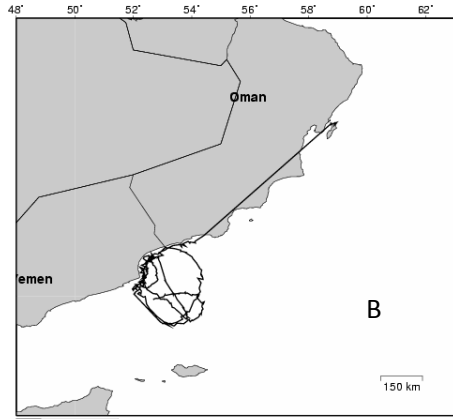
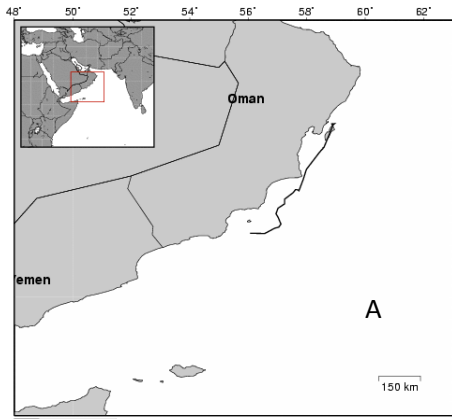
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**Supplement 1.** Behaviour and movement data relating to internesting and post-nesting periods that are presented for specific turtles or summarised in the main text are presented here for each individual turtle.



**Fig. S1.** Female nesting activity and nest-site fidelity for the 10 study turtles. Fidelity to nesting location is shown by water depth and displacement at near-zero. Data are synchronized at approx. 2-wk intervals. Additionally, the daily number of uplinks received by Argos satellites is plotted and generally shows peaks around the deduced time of nesting. This is expected, as the animal is more active and for some period on land at this time. Turtle A provides the best example of site fidelity and corresponding high number of Argos uplinks at nesting with 5 discernible nesting events taking place before departure from the nesting area. These results were used together with absolute location to determine the nesting activity of each individual



**Fig. S2.** Descriptions and maps of post-nesting behaviour of individual turtles. For geographical locations see Fig. 1 in the main article.

Turtle A was tracked for 22 d after completion of its breeding season. This turtle migrated southwards but the track ceased before any foraging area could be identified. A second turtle (F) spent the next 88 d within 100 km of the nesting area, after it had finished nesting, before departing to the south. Tracking of this southerly migration lasted 11 d and no final foraging area was determined. Both tracks (A and F) ceased abruptly in the area of the Al Halaniat Islands (Oman).

Two turtles (D and G) remained wholly within the waters of Oman. Turtle D first migrated north, where it spent 1 mo undertaking extensive oceanic loops in waters >3000 m deep off the coast at Ras Al Hadd. Subsequently, it moved to shallow (mean 172 m deep) coastal waters 160 km north of Masirah for a further month. After one final loop, taking it to the territorial waters of Pakistan, it headed south, passing Masirah en route. It spent a final 59 d foraging in waters averaging 1500 m deep 275 km south of Masirah before transmissions ceased. Turtle G migrated south after a month, including a brief loop to the north. Maximum southerly displacement (530 km) coincided with a period in deep waters (>1000 m depth). The final 4 mo of tracking were spent in shallow water (mean 170 m deep) averaging 314 km from the nesting area.

A total of 6 turtles (B, C, E, H, I and J) migrated south of Masirah to the area north of Socotra Island (Yemen) at the junction of the Arabian Sea and the Gulf of Aden. One turtle (H) initially moved north, spending 1 mo looping in waters averaging >2000 m deep east off Ras Al Hadd before moving nearer to shore for a week. Subsequently, the turtle moved once more into oceanic waters and commenced its migration south to the large-scale habitat north of Socotra Island. Turtle I migrated north after its fourth nest, coming close to shore near the green-turtle nesting area at Ras Al Hadd. It then returned to Masirah for a short period before continuing its southward migration to the same region as the others. Timing of the movements indicates it was unlikely that it nested again after its initial departure. The 6 turtles spent a significant portion of time (64 to 93%) circling between the island and the mainland in deep water. One of these turtles (C) temporarily entered the eastern part of the Gulf of Aden but soon returned to the region north of Socotra Island.